ASSIGNMENT 1

Textbook Assignment: "Technical Administration" and "Principles of an Internal Combustion Engine," chapters 1 and 2, pages 1-1 through 2-22.

1-1. Guidelines for the maintenance of equipment assigned to the Naval Construction Force are contained in what NAVFAC publication?

1. P-280
2. P-300
3. P-315
4. P-458

1-2. The equipment maintenance branch is normally under the overall supervision of a person having what rank?

1. An EQCM
2. A CMCS
3. A GS-12
4. A CMC

1-3. The overall responsibility for ensuring proper maintenance and repair of all automotive, construction, and materials-handling equipment assigned to an NMCB belongs to what person?

1. The light shop supervisor
2. The heavy shop supervisor
3. The support shop supervisor
4. The maintenance supervisor

1-4. What person is responsible for ensuring that the equipment repair order is complete with times, initials, materials list, and required requisitions?

1. The cost control supervisor
2. The preventive maintenance clerk
3. The shop supervisor
4. The inspector

1-5. What person should report any unscheduled repairs to a piece of CESE to the shop supervisor?

1. The crew leader
2. The inspector
3. The preventive maintenance clerk
4. The maintenance supervisor

1-6. Under normal conditions, an inspector inspects an item of equipment brought into the maintenance shop a total of how many times?

1. One
2. Two
3. Three
4. Four

1-7. What person is responsible for maintaining the deadline file and deadline status board?

1. The cost control supervisor
2. The technical librarian
3. The direct turnover clerk
4. The preventive maintenance clerk

1-8. Which of the following equipment services are included in organizational maintenance?

1. Lubrication and minor adjustments
2. Component rebuilding and major repairs
3. Major overhaul and restoration
4. All of the above

1-9. What is the primary objective of preventive maintenance?

1. Ensure early detection of deficiencies
2. Ensure that the equipment is clean and serviceable
3. Maximize equipment availability and minimize repair cost
4. Perform minor adjustment and services

1-10. What type of maintenance is performed on equipment requiring major overhaul or comprehensive restoration?

1. Operational
2. Organizational
3. Intermediate
4. Depot

1-11. Which of the following maintenance personnel can authorize changes to the PM schedule?

1. Maintenance supervisor
2. Shop supervisor
3. Cost control clerk
4. Inspector

1-12. NCF equipment is scheduled for preventive maintenance at what standard time intervals?

1. Once every 20 calendar days
2. Once every 20 working days
3. Once every 40 calendar days
4. Once every 40 working days

1-13. After the PM system is established and operating, what person should review its effectiveness?

1. Shop supervisor
2. Cost control supervisor
3. Maintenance supervisor
4. Brigade equipment office

1-14. When a prestart check is being performed, the operator should use what form?

1. NACFAC 9-11240/13
2. NAVFAC 11200.1
3. NAVFAC 9-11240/2
4. NAVFAC 11200.12B

1-15. How many times a day is an operator required to inspect an assigned item of CESE?

1. One
2. Two
3. Three
4. Four

1-16. What type of PM is used as an annual safety inspection?

1. 01
2. 02
3. 03
4. 12

1-17. What person may authorize controlled parts interchange on deadline equipment?

1. Brigade equipment office
2. Alfa company commander
3. Maintenance supervisor
4. Shop supervisor

1-18. Which of the following is NOT a reason deadlined vehicles should be inspected on a regular basis?

1. To detect any cannibalization
2. To ensure adequate preservation
3. To prevent deterioration
4. To maximize use of personnel

1-19. What type of ERO is used to estimate damage and have any required repairs performed?

1. 12
2. 07
3. 06
4. 03

1-20. Which of the following information is NOT recorded on the PM record card?

1. Type of PM performed
2. Oil and filter change
3. Cumulative mileage/hours
4. Engine manufacturer

1-21. When repairs are completed, the copy of the ERO filed in the equipment history jacket is what color?

1. White
2. Blue
3. Yellow
4. Green

1-22. Which of the following types of labor is considered direct labor?

1. Material support
2. Project travel
3. Site surveying
4. Safety training

1-23. Completed time cards are forwarded to what department?

1. Administration
2. Operations
3. Safety
4. Supply

1-24. In an NMCB, what person is responsible for general supply, ship's service, material control, and delivery?

1. s-2
2. s-3
3. s-4
4. s-7

1-25. When an NMCB deploys, the initial supply of repair parts should support operations for how many days?

1. 60
2. 90
3. 120
4. 180

1-26. What level of repair parts support is assigned to a CBU?

1. D
2. G
3. H
4. O

1-27. What is the lowest level of repair parts support?

1. O
2. H
3. G
4. D

1-28. Repair parts for use on one make and model of equipment are known as parts

1. peculiar
2. specific
3. consumable
4. common

1-29. To determine the APL(s) pertaining to a particular vehicle, which part of the COSAL should you refer to?

1. I
2. II
3. III
4. IV

1-30. Which part of the COSAL provides a cross reference between part numbers and stock numbers?

1. I
2. II
3. III
4. IV

1-31. What criterion is used to determine how many technical manuals are provided to a unit for each type of vehicle assigned?

1. Vehicle population
2. Location of the maintenance facilities
3. Size of the maintenance facilities
4. None, each unit receives two copies

1-32. Manuals in excess of COSAL quantities must be returned to M3 stock at what location?

1. SPCC Mechanicsburg, Pennsylvania
2. CBC Gulfport, Mississippi
3. CBC Port Hueneme, California
4. CBC Davisville, Rhode Island

1-33. Which of the following forms should you use when requesting repair parts from the supply department?

1. NAVSUP 1949
2. NAVSUP 1342
3. NAVSUP 1250
4. NAVSUP 1099

1-34. When filling out a supply requisition form, you use the communication symbol for zero for what reason?

1. Because zero is not used in the NSN system
2. To allow computer scanning of the requisition
3. It is required by supply
4. To distinguish it from the letter "O"

1-35. What digits in a national stock number (NSN) identify the country where the part was cataloged?

1. lst, 2nd, 3rd, and 4th
2. 5th and 6th
3. 7th, 8th, and 9th
4. 10th, 11th, 12th, and 13th

1-36. Priority "A" (NORS) requisition should be ordered by supply within how many hours?

1. 1 2
2. 2 4
3. 3 6
4. 4 8

1-37. After the requisition number is entered on a NAVSUP 1250, supply returns what copy to the DTO clerk?

1. White
2. Green
3. Pink
4. Yellow

1-38. In what manner are the repair parts summary sheets tiled by the DTO clerk?

1. By NSN number
2. By Julian date
3. By PM group
4. By equipment codes

1-39. An internal combustion engine is a machine that

1. uses heat to create mechanical energy
2. converts heat energy to mechanical energy
3. converts mechanical energy to heat energy
4. use mechanical energy to create heat

1-40. What action forces the piston downward during the operation of a gasoline engine?

1. Compression of the air-fuel mixture
2. Intake of the air-fuel mixture
3. Expansion of the heated gases
4. Exhaust of waste gases

1-41. Reciprocating motion is changed to rotary motion in the combustion engine by means of a

1. piston pin and a connecting rod
2. flywheel and a crankshaft
3. cylinder and a piston
4. crankshaft and a connecting rod

1-42. What are the basic parts of a one-cylinder engine?

1. Cylinder, camshaft, valves, piston, piston pin, connecting rod, and crankshaft
2. Cylinder, valves, piston, piston pin, connecting rod, and crankshaft
3. Cylinder, piston, piston pin, connecting rod, and crankshaft
4. Cylinder, piston, connecting rod, and crankshaft

1-43. What is the ratio of crankshaft revolutions to piston strokes in a one-cylinder engine?

1. 1 to 1
2. 2 to 1
3. 1 to 2
4. 4 to 2

1-44. Which of the following actions occurs during the second stroke in the sequence of strokes in a four-stroke cycle engine?

1. The air-fuel mixture is compressed
2. The piston moves downward
3. The waste gases are exhausted
4. The air-fuel mixture is ignited

1-45. At what point in the cycle of a four-stroke cycle engine does ignition occur?

1. At the end of the compression stroke
2. At the beginning of the intake
3. During the power stroke
4. At the beginning of the compression stroke

1-46. During which stroke in the operating cycle of a four-stroke cycle engine is the greatest force exerted on the piston?

1. Intake
2. Compression
3. Power
4. Exhaust

1-47. In what order do the strokes of a four-stroke cycle engine occur during operation?

1. Compression, power, exhaust, intake
2. Compression, power, intake, exhaust
3. Intake compression, power, exhaust
4. Intake, compression, exhaust, power

1-48. A two-stroke cycle engine operating at the same speed as a four-stroke cycle engine has a power advantage of approximately what percentage'?

1. 30 to 40
2. 50 to 60
3. 60 to 70
4. 70 to 80

1-49. Which of the following reasons accounts for the failure of a two-stroke cycle engine to produce twice the power of a four-stroke cycle engine'!

1. Power is used to drive the blower
2. Burned gases not completely cleared from the cylinder
3. Smaller amount of air is admitted
4. Each of the above

1-50. In a two-stroke cycle engine, one cycle equals one crankshaft revolution and what number of piston strokes?

1. One
2. Two
3. Three
4. Four

1-51. How are engines most commonly classified?

1. The kind of fuel they use
2. Their cooling system
3. Their valve arrangements
4. The number of cylinders

1-52. In a four-stroke cycle, six-cylinder engine, the throws of the crankshaft are set at what number of degrees apart?

1. 180°
2. 120°
3. 90°
4. 45°

1-53. The flywheel of an engine affects the operation of the engine by

1. smoothing out power impulses
2. keeping the engine from stalling
3. preventing crankshaft vibration
4. increasing piston life

1-54. What type of cylinder arrangement has all cylinders cast in a straight line above the crankshaft'?

1. V-type
2. Horizontal opposed
3. In-line
4. Radial

1-55. The firing order is not marked on an engine and a manufacturer's manual is not available. In this case, you use what method to determine the firing order of the engine?

1. Crank the engine by hand while observing the order in which the exhaust valves open
2. Crank the engine by hand while observing the timing mark on the crankshaft
3. Crank the engine with the starter and observe the rotor in the distributor
4. Crank the engine by hand and observe the order in which the intake valves open

1-56. What type of valve arrangement has the intake valves located in the head and the exhaust valves located in the engine block?

1. F-head
2. T-head
3. I-head
4. L-head

1-57. What type of valve arrangement has the intake and exhaust valves located on opposite sides of the cylinder in the block, each requiring their own camshaft?

1. F-head
2. T-head
3. L-head
4. I-head

1-58. What are the definitions of torque, energy, and power-in that order?

1. Turning force, ability to do work, rate of doing work
2. Turning force, rate of doing work, ability to do work
3. Rate of doing work, turning force, ability to do work
4. Rate of doing work, ability to do work, turning force

1-59. What device can provide a quick report on engine conditions by measuring output at various speeds and loads?

1. Prony brake
2. Engine dynamometer
3. Engine analyzer
4. Chassis dynamometer

1-60. The power needed to overcome engine friction is known as

1. inertia
2. engine torque
3. frictional horsepower
4. frictional inertia

1-61. The relationship between the amount of air-fuel mixture that enters an engine cylinder and the amount that could enter is known as what type of efficiency?

1. Mechanical
2. Volumetric
3. Thermal
4. Operational

1-62. Volumetric efficiency of an engine can be increased by which of the following actions?

1. Controlling engine operating temperature
2. Heating the intake mixture
3. Reducing friction loss between moving parts
4. Modifying intake passages

1-63. What is the meaning of the cylinder designation 3 1/4 by 3 1/2 inches?

1. Piston stroke is 3 1/4 inches and cylinder bore is 3 1/2 inches
2. Cylinder diameter is 3 1/4 inches and piston stroke is 3 1/2 inches
3. Cylinder bore is 3 1/4 inches and piston diameter is 3 1/2 inches
4. Piston stroke is 3 1/4 inches and cylinder bore is 3 1/2 inches

1-64. The compression ratio of an engine is determined by

1. subtracting the cylinder volume at TDC from the cylinder volume at BDC
2. dividing the cylinder volume at TDC by the cylinder volume at BDC
3. multiplying the cylinder volume at TDC by the length of the piston stroke
4. dividing the cylinder volume at BDC by the cylinder volume at TDC

1-65. Increasing the compression ratio of an engine provides

1. more power
2. high engine speed
3. higher fuel consumption
4. less cylinder wear

1-66. The period in a four-stroke cycle engine when the intake valves open before the exhaust valves close is known as the

1. opening point
2. closing point
3. valve overlap
4. duration

1-67. Ignition timing should be adjusted so the spark occurs when the piston does which of the following?

1. Nears the end of the compression stroke
2. Starts down on the power stroke
3. Completes the intake stroke
4. Completes the compression stroke

1-68. As engine speed increases, power loss is avoided by altering ignition timing., This is accomplished by what component?

1. High speed compensator
2. Vacuum advance
3. Spark advance
4. Mechanical compensator